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THE ARTISTIC TREATMENT OF METALWORK.

BY

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In all the numberless phenomena of nature and their products there is ever to be found a greater or less degree of similitude, either in their external appearance or their internal structure and organisation, according to which science has erected her systems of classification: and these systems, besides their prominently theoretical character, have a decidedly practical import, since they explore the hidden powers of the several products, examine the conditions of their existence, and thus provide a well prepared apparatus by which are naturally met the manifold wants of domestic and industrial life. They provide the joiner and carpenter with a group of different species of wood suitable for the most varied purposes; bestow on them through acquaintance with their external and internal qualities the power of producing, not only works of a serviceable and lasting kind, but creations of beauty, and lead them on to utilize the peculiarities of each separate species of wood for the artistic embellishment of their productions. Again their study enlightens the metal-worker as to the nature and properties of the several metals, points out their degree of hardness and fusibility, their elasticity and resistance to atmospheric influences, and thus empowers him to accommodate himself with certainty to all their requirements. So too do potters and stone-workers derive the principles by which they make choice of the material most adapted to their purposes, and the more they become acquainted with the properties of their raw materials, their capacities of durability, their adaptability to their tools, and their fitness for the purposes they have to serve, the more easy will be their tasks, the more sterling their works, and the more simple the path which will conduct them from the domain of mere industry to the realms of art.

In none of her departments can Art-industry spare the teachings of science. She requires it as the natural and indispensable condition of her development. With one foot supported by the basis of æsthetical principles, and the other by purely technical and scientific scrutiny, if she lose her footing on the latter, she will fall: i. e. her growth will be unnatural and crippled. This truth, so self evident, would have become tedious by its frequent repetition did not every day afford new proof how it is ignored and misunderstood not only by workers in Art-industry, but even by artists and others whose calling and profession should oblige them to a better knowledge. If children and savages cannot distinguish the species in the genus, but to them every tree is but a tree, every flower a flower and every stone a stone, they are to be excused by reason of their defective power of discrimination which no instruction has bettered, and at all events they do not mistake as to the genus, they do not take stone for metal or wood for iron, and with the earliest development of his intelligence, the child begins to understand that a glass of stone or a wood of iron is an absurdity into which not even child should fall. But whatever appears logically preposterous will obtain no higher significance, but rather the reverse, even if presented by an artistic hand in any bodily shape. I will say nothing against some one material presenting itself in the disguise of another, as garden chairs of wrought or cast iron made like cane chairs in the exact form and colour of the natural wood, or as where silver is made to look like lead, and glass like stone, though I can see no other reason for this, than that which taught the men of prehistoric times to make their vessels of horn and stone, namely, the absence of the desired material and the necessary tools. But now, when stone appears in the shape of wood, or wood in the form of metal, this is not mere fantasy but a plastic translation of wood into stone and iron into wood.

The importance of a thorough consideration of the material itself in purely artistical representations may be seen, among other proofs, by those busts in wood, which, by their natural treatment are of the most striking effect, but become poor and without expression, if not indeed hideous, as soon as they are executed in plaster, which always has the appearance of stone. The three Nuremberg artists, Adam Kraft, Veit Stoss and Peter Vischer were all equally good in modelling, but we never think of the works of either apart from their material. With the first we always connect the sculptor, with Stoss the wood carver, and with Vischer the metal worker. If we try to represent their works in any other material than their own, casting the figures of Stoss in metal or Vischer's tomb of St. Sebaldus in wood, the creations of which Germany is so proud would be no longer recognisable. What would these masters of their craft say to the idea that for a teacher at a practical school of art, if he does but know how to model, the modifications which the model must undergo by the nature of different materials need not be considered. Certainly one may learn to paint at an Academy without regard to the particular technical processes: but there is a vast difference between painting in oil and dashing off a watercolour.

That exact knowledge of, and acquaintance with the material, which, in every production of Art-industry, plays so important a part — so important indeed that it cannot sufficiently be insisted upon — forms always a great item in our modern efforts to lead that industry into a fruitful and permanent path: if it were not so, and if a new æra of its development depended only on professional artists, without regard to strict scientific theories, that æra would certainly long ago have commenced, as certainly as that it has not yet done so.

We have already said that the more profoundly this scientific systematising is mastered, the better able will the artisan be to produce sterling and more perfect works in his department. In proof of this we will select the province of metalwork, and put together a few remarks upon it which may serve as the ground-work for some general observations on style.

In the metallic Kingdom it is undeniable that gold reigns supreme. Besides its other internal properties, its rarity gives it a preeminence over all other metallic elements. To its internal qualities belong its purity and its beautiful dead tint, its wonderful elasticity and extensibility, and lastly its unchangeableness and insensibility to rust and atmospheric influence. It is this combination of qualities which determines its use and application, and which distinguishes that application from that of other metals, just as it is itself distinguished from them. It is especially the metal of personal ornament. In fact, gold and ornament are so linked together in our vocabulary and habits of thought, that the word gold instinctively calls up the idea of ornament. This peculiar and not accidental characteristic is the reason why it seems unfitted for unimportant uses. Vessels, stuffs, figures made entirely of gold have always something inconsistent with the dignity of the material, and therefore such works should be so composed that the gold, degraded from its higher post as the decorative element, may be a ground for further ornamentation of a higher order, such as jewels, enamels &c. Golden vessels set with pearls or jewels, or decorated with enamel, gold brocades &c., are, but in a higher degree, just as correct as to style as silver articles with gold ornaments, or simple tapestries with gold patterns. Moreover gold should only be used in a reasonable i. e., a sparing manner, and with due regard to other more important parts of the whole; a superabundance of ornament is especially a sign of a barbarous or degenerate taste; hence the psychological fact that idiots and the inmates of lunatic asylums generally display a desire to deck themselves in every imaginable and unimaginable ornament. If too it is correct, which I at least do not doubt, that most of the so called national costumes are by no means national, but rather the remains of a strange capricious fashion, which, after branching off in different directions, have here and there become stationary, that general overloading of the gold ornament can only confirm the opinion we have enunciated, just as the present fashion among the lower classes leads young women and maidens to put on their whole possession of brooches &c. as their sunday ornaments. The outrageousness of taste in this respect was seen in olden times in the Temple of Jerusalem, whose walls, flooring and roofs were covered with plates of gold, just as at the same time, the descriptions of impossible houses of gold entered into the compositions of the poets. Further, gold as an ornament must not be of any weight, nor in any way appear oppressive. The idea of savages who pierce their lips and ears and insert therein wooden disks, increasing more and more in size as the muscles are extended, and who consider the largest as ever the most graceful, should find no analogy in the lobes of the ear which are too often with us disfigured by heavy earrings of gold. The material itself gives sufficient intimation of the lightness with which it should be used. In olden times we always find this property of gold particularly attended to, and the largest and most elegant wreaths, diadems, earrings &c., are of a lightness that would be entirely inconceivable by any one who is accustomed to estimate ornament simply by its intrinsic value. To what a depth our Art-industry has sunk in comparison with that of former times, may be seen from the manner in which objects of gold and silver are now estimated, the material value being the principal thing, while the extrinsic artistic value is but secondary. Certainly the custom which prevails among rustic male populations to use silver pieces of money instead of buttons, and that in the greatest quantity, can spring from no æsthetic idea; but just as little can we consider it a proof of refined taste, to esteem artistic worth as of less account than that of the raw material. Where a perception of the Beautiful, matured by scientific reflexion is wanting, the want will express itself, however differently, by a certain coarsensess. Lastly, let us inquire in what external shape gold corresponds the best to its ornamental destination. Nature spreads before our eyes throughout the year a rich casket of jewels. Spring, with dewy grasses and dark green meadows; Summer, with her blossoms and flowers; Autumn, with her ripening fruits, and even Winter, with her boughs of hoar frost vie with one another in turns to make the earth one everlasting hall of beauty. If we compare all these different decorations of nature, we find that they all have this in common, that every one of them is covered with a light down, a sort of dewy rust, on the destruction of which the object, whether flower or fruit, dewy grass or frosted bough, loses the character of its natural originality and freshness. How enticing and charming is the fresh gathered fruit from tree or vine, how pleasing the flower and blossom still covered with its tender pollen. If this soft covering be rubbed off, the colours are no richer, while the appearance of the whole is infinitely commoner. So is it with gold and its application. Its colour is so pure, its metallic sheen so peculiar to itself that it will bear comparison with the most beautiful productions with which autumn adorns her trees and summer her plants. Any polish upon gold increases its value just as little as the wiping off the tender down from the gathered fruit. And there is also another disadvantage. The bright polish diminishes the effect of the modelling and renders it almost invisible. A comparison with brass articles will make this clearer. These, being cast and therefore brittle, always demand a certain volume of body, the massiveness of which disappears under the white polish by which the different rays of light are divided. That which is of advantage to brass by its greater massiveness, can only be an injury to gold and its more delicate treatment. Massive objects in brightly polished gold have the appearance of brass, and are thus degraded from their high station, or their delicate execution is impaired under the many intersecting rays of light, and so their artistic form, which is in reality their greatest merit, is lost. On the other hand, a reasonable combination of the dead gold with some polished parts may have a very beautiful effect, for these then become an ornament on the golden ground, like the sunbeam playing on the butterfly's wing, and the result is an object of art which may stand by the side of the jewelled, enamelled or coloured gold of which we have spoken above. This manner of working the gold was known and practised in ancient times, and when on the one hand the dead ground was produced by a sort of granulation, which has only lately been again discovered, the lights brought to work upon some prominent parts served to display art's creation in full brilliancy.

To gold succeeds silver as second in importance among the metals. In all those respects which distinguish gold, it is inferior to it, is found in much greater quantities, is therefore of much less value, has not the same elasticity and extensibility, but on the other hand is almost equally brilliant in its white colour. It is often used as the ground on which gold is applied as ornament, while with less valuable metals, such as copper, iron &c., it is frequently the decorative element either by itself or together with gold.

The proper field of its application is in vases and services for the table. This is chiefly due to its plastic property, which makes it the most fitting material for wrought and sculptured objects of art, as well as to its pure colour which gives the fullest effect to the contours and outlines of the figures. In articles of large surface, the monotony of this is sought to be lessened, partly by the application of Niello, partly by the introduction of an incised pattern, modified according to the more or less important parts of the whole. In our times this monotony of the surface seems to be much less considered a fault, for far from destroying or enlivening it, it is often absurdly polished bright throughout, whereby what we have said above about the burnished gold ornament is still more true. For as these vessels and articles are objects of daily use and constantly in contact with men's hands, it cannot but be that every hand that touches them will leave behind a visible impression on the mirrorlike surface, giving the effect of an exterior dead surface, just what ought to have been originally preserved. This natural dead metallic colour, which, for example, particularly distinguishes Indian silver articles, is as far as possible different from the lead colour which our silversmiths give to their oxydised silver and which does not in the least produce the same effect as the ancient examples. Formerly the silver vessels became an especial treasure in every respectable house, and it is wonderful, how nothwithstanding the characteristic and mercantile type shown by most of the productions of the sixteenth century which have come down to us, the artistic value of them is ever of importance, because it could only be a long and sound schooling that could produce that elegance which is to be remarked in the design and execution, an elegance which we are far from attaining at the present day. The fault lies particularly in that now favorite decoration of silver articles with cast additions, which, not growing naturally out of the whole composition, often sufficiently indicate their independent existence and later birth, and thus introduce discord and confusion into the subject and execution. In the present state of affairs, when the practical silversmith is only too often obliged to execute his work according to the designs of artists who place the essence of the composition in the artistic shape and intellectual idea, but know nothing and frequently desire to know nothing of the properties and demands of the material itself, it is difficult to predict a better future for this once so celebrated art.

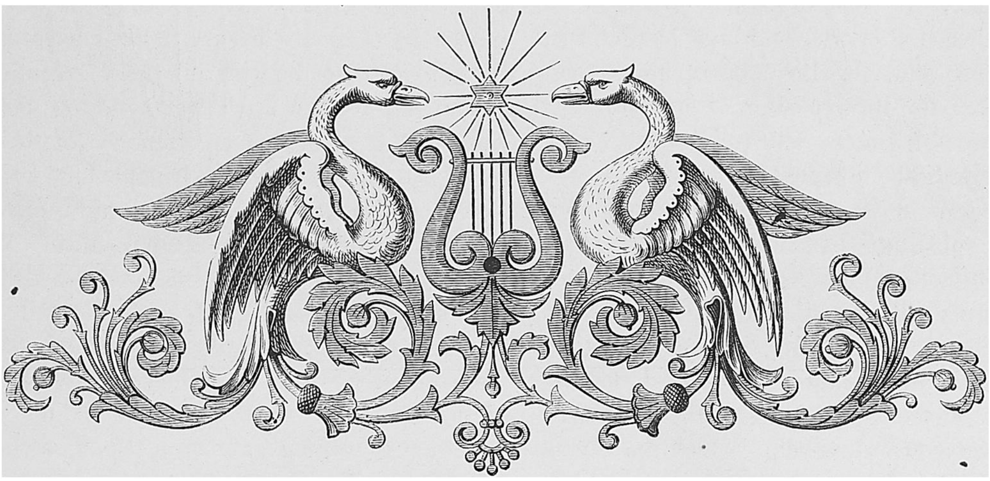
The most ancient silver articles which have come down to us are still regularly distinguished by a decoration through gilding. If we inquire into the manner of its application, the answer is, as we have already stated, that all figure ornaments and more especially the decorative additions appear in gold while the groundwork retains the silver tint. The reversion of this principle, which indeed sometimes occured among the ancients, arranging silver ornaments on a ground of gold, is most inadmissible in itself, and has a most unpleasant effect when lighted up, since the yellow surface of the gold is then seen in greater brilliancy than the ornaments of silver, whereas the exact contrary should be the case. Lastly, silver comes in as an independent means of ornament as a substitute for gold, but, as it does not possess those properties which make the latter so adapted to this end, namely its excessive extensibility and lightness, and as the ornamental part should always appear more or less free from all heaviness, silver has struck out for itself a peculiar style of ornament in the well known filigree work. This delicate, transparent and threadlike ornament, which in the north and east is still a much approved and common article of luxury, is of extraordinarily lightness, appears almost as the bodily expression of an idea, and gives a sure indication how art can spiritualise matter where it understands how to enter into every one of its peculiar properties.

Next to gold and silver, iron plays an important part in metallic industry. In the systematic classification of metals many others rank between them, but these are of far less importance for Art-industry than for common purposes; among them are tin and zink, copper and lead. The mixture of copper and tin, or bronze, has from the oldest times to our own day maintained a conspicuous place among the productions of Art-industry. Vases and services of bronze were the pride of the rich Romans, and the malleability of the material and its peculiar fusibility rendered it very valuable both for cast and wrought works. The peculiarity of this metallic composition, in assuming, after the lapse of time, a coating called patina, which takes away its rude brilliancy, giving it at the same time a richer and more vivid hue, has induced modern artisans to use zink for their busts and vases, as particularly adapted for the reception of metallic coatings, producing them with much skill and success in the shape and colour of antique bronzes.

As brass is used to imitate gold, so tin serves in a certain degree as a substitute for silver in many cases where the latter metal should be legitimately employed. In the sixteenth century plates and drinking cups of tin were indispensable requisites of an opulent household and were decked with the quaintest and most delicate ornaments. In our Museums we have still preserved jugs of a truly masterly workmanship, which served as cups from which to drink the unfermented wine. While the rich patrician sipped his wine from a silver goblet, the plebeian drunk his cider from a can of tin and how this material was suited to its purpose may well be imagined, by thinking of the pewter jug of beer which is now in common use. If silver and gold are the metals of luxury, the one for ornament, the other for objects of use of a nobler order, iron is the metal for real artisanship, the meritorious workman beside the two aristocrats. It is distinguished by its immense strength and density, and by a hardness surpassed by no other metal. Besides, when standing in the open air it is but little affected by atmospheric influences; it is fusible only by a great degree of heat, is very malleable, and under certain conditions is capable of assuming an elasticity and flexibility which impart to it a value beyond gold. Its hardness and malleability render it the fitting material for all the tools of ordinary use. As it wears out but little by long use, it is indispensable wherever the usefulness of a material depends on its resistance to friction. It is the material of the blacksmith and locksmith and the thousands of useful things that issue from their workshops. Its strength and solidity recommend it as suitable for defence in all sorts of railings, screens and chainwork and all the rich store of armour and artillery. The immense heat necessary for melting it makes it fit for objects much exposed to the action of fire, while the triumph of its elasticity is seen in watch springs, an elasticity far surpassing that of all other metals. Thus iron has a distinct and limited circle within which its productions can range. It can never compete with silver or gold. Ornaments of iron, however delicately wrought, can never really be considered such, as may be seen by some samples of cast trinkets of modern times. Drinking vessels of this material may at most be excused as curiosities of the craft, but can never meet with approval. Even the celebrated Augsburg iron chair, now exhibited in England, in spite of all the skill manifested in its decorative parts, is but abnormal in style. Iron is not the material for furniture, unless intended to defy the influences of the weather in the open air. But here arises the question how such and other articles are to be shaped in reference to style. The answer can only be given on examination of the two ways in which they are produced as wrought and cast. Wrought iron works, in all those objects whose shape is not distinctly presented by their destination, appear in forms exactly corresponding to the technic of their execution. Iron bars, hammered on the anvil bend up on both sides of the spot that is struck in consequence of the elasticity of the metal, so that from the straight bar are formed spiral curves which are the fundamental motive of almost all the scroll works of the Renaissance. With admirable skill and intelligence was this motive artistically improved, and large interlaced arabesques created, which seemed to move easily and capriciously in the fixed frames, developing above into those elegant rosettes and bunches of flowers which were the pride of the smiths of old. Whether it were a gate or a tripod, a chandelier or firedog that was to be made, the scroll was the predominant element in the design of all. When finished, some parts were gilded, especially the upper projections, flowers, leaves and masks, which were interwoven with the spirals, but the character and colour of iron were preserved to the whole, and thus the disagreable impression was avoided which is produced by our modern garden furniture of iron painted to imitate wood. Compared with this method of manufacture, cast iron follows a very different path. Here, the moulding is the most essential part, together with the multiplication of the pattern. Hence it follows that every exact imitation of nature must be carefully avoided, for a frequent repetition or series of figures becomes so much the more unpleasant to the eye in proportion as they the more resemble the phenomena of nature. We meet with such representations but too frequently in old tapestries, on Persian flags of fayence, but if we try to imitate these flowers and animal forms in their natural shapes, we obtain again that sort of paper pattern which drives us to distraction by the constant repetition of four or five groups or landscapes. But, if a flower or figure of an animal is treated only as a pattern, it bears repetition, so that ornaments of such a style may be adapted to cast iron as well as to paperhangings or tapestries. Still it appears preferable to keep within the limits of geometrical ornaments for trellisses and the like, for in this style will rarely anything be produced that can be called ugly, whereas we learn from experience with what difficulty our artists derive their types from the individual phenomena of nature. From its strength and solidity cast iron must be limited to a small volume, and always exhibit to the view its own character. Slight gilding in single lines and stripes on a dark ground essentially contributes to a beautiful display of its configuration.

Among the different modes of decorating iron, we may mention especially etching, damascening and engraving. These methods are most frequently applied to weapons, as if to bring them up to the level of the richness of the soldiers' costume. The ordinary works of locksmiths in the Middle ages and the Renaissance period were slightly engraved, and a steel blue colour imparted to them, by which they were very advantageously relieved from the usual dark ground of the wood on which they were fixed.

SPECIMENS OF ORNAMENTATION.



N⁰ 1. Vignette designed by Prof. F. Fischbach in Hanau.